

# Notice of Allowability

Application No.

10/510,716

Examiner

Ganapathirama Raghu

Applicant(s)

HAKAMADA ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/21/07.
2. ☒ The allowed claim(s) is/are 1,4-8,10,11 and 14-37.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Detailed Action***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application on 10/12/07 after First-Action Final rejection (08/15/07). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/21/07 has been entered.

In response to the First-Action Final rejection (08/15/07), applicants' filed a response and amendment received on 10/12/07. Said amendment, amended claims 1, 4, 14-16, canceled claims 2-3, 9 and 12-13 and added new claims 23-32. Thus claims 1, 4-8, 10, 11 and 14-37 are pending and are now under consideration.

Objections and rejections not reiterated from previous action are hereby withdrawn.

***Drawings***

Drawings are accepted.

***EXAMINER'S AMENDMENT***

An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it must be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Vincent K. Shier (Reg. No. 50,552) on 11/27/2007.

The application has been amended as follows:

***Abstract***

Delete the Abstract sheet and replace with the attached Abstract on a separate sheet of paper.

***In the Claims***

**Claim 15:** Line 4, delete “having” and replace with “has”

**Claim 16:** Line 4, delete “having” and replace with “has”

**Claim 24:** Line 1, delete “the” and replace with “a”

**Claim 26:** Line 1, delete “having” and replace with “has”

**Claim 27:** Line 1, delete “having” and replace with “has”

**Claim 28:** Line 2, delete “having” and replace with “has”

**Claim 31:** Line 1, delete “the” and replace with “a”

**Claim 33:** Line 1, delete “having” and replace with “has”

**Claim 34:** Line 1, delete “having” and replace with “has”

**Claim 35:** Line 2, delete “having” and replace with “has”

***Allowable Subject Matter***

Claims 1, 4-8, 10, 11 and 14-37 are allowed.

The following is an examiner's statement of reasons for allowance:

All elected claims, are limited to an isolated recombinant mutated alkaline cellulase polypeptide obtained by deleting, from a cellulase having the amino acid sequence SEQ ID NO: 2 or a homologous amino acid sequence exhibiting 95% sequence homology therewith, a peptide consisting of one or more amino acid residues chosen from 357th to 362<sup>nd</sup> positions in SEQ ID NO: 2 or from corresponding positions in homologous amino acid sequence and replacing the peptide with an insertion peptide of defined sequences. Following a diligent search it was

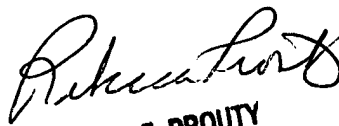
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determined that the closest prior art is the disclosure by Endo et al., of KAO Corp., (JP20012315669, publication date 08/28/2001, see English translation provided; see sequence alignment provided) have disclosed a gene for an alkaline cellulase from *Bacillus sp.*, that has 94.6 % homology to SEQ ID NO: 2 of the instant application with mutations in positions 363, 370 and 373 of SEQ ID NO: 2 and having alkaline cellulase activity. The utility of said variant polypeptide and encoding polynucleotide is credible based on the ability of said polynucleotides when expressed in heterologous host cells to produce a variant recombinant alkaline cellulase. Said variant alkaline cellulase has real world utility, for example it can be incorporated in laundry detergents.

Any comments considered necessary by applicant must be submitted no later than the payment of issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ganapathirama Raghu whose telephone number is 571-272-4533. The examiner can normally be reached on 8 am to 4.30 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of the application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Ganapathirama Raghu, Ph.D.  
Patent Examiner  
Art Unit 1652  
Nov. 31, 2007.

  
REBECCA E. PROUDY  
PRIMARY EXAMINER  
GROUP 1800-  
1600

*Abstract*

A mutated alkaline cellulase derived from a cellulase having the amino acid sequence represented by SEQ ID NO: 1 or one having a homology of at least 90% therewith by deleting one or more amino acid residues from the 343- to 377-positions in SEQ ID NO: 1 or a region corresponding thereto and then inserting a peptide having from 2 to 15 amino acid residues into the deletion site; and a gene encoding the same. The above alkaline cellulase has an optimum pH value close to the pH value of laundry water (around pH 10.5) and, therefore, is useful as an enzyme for detergents.